METHOD FOR THE EVOLUTIONARY DESIGN OF BIOCHEMICAL REACTION NETWORKS

ABSTRACT OF THE INVENTION

The present invention relates to methods for achieving an optimal function of a biochemical reaction network. The methods can be performed *in silico* using a reconstruction of a biochemical reaction network of a cell and iterative optimization procedures. The methods can further include laboratory culturing steps to confirm and possibly expand the determinations made using the *in silico* methods, and to produce a cultured cell, or population of cells, with optimal functions. The current invention includes computer systems and computer products including computer-readable program code for performing the *in silico* steps of the invention.